DEQ Budget Background Information
Mercury Building Block Requests

January 2007

<u>One-Time Funding Request - Great Salt Lake Assessment</u>

$34,400 for water column analysis
$17,100 for sediment sample analysis
$15,000 for waterfowl food chain analysis
Total: $66,500 in one-time monies

The Great Salt Lake is a significant stopover in a key North American migratory flyway. The Lake is also a favorite recreational area. Mercury levels found in waterfowl have raised public health concerns. A characterization of the ecosystem and its affected biota is in the public's best interest. This work will form a foundation, however further work will likely be needed due to the size of the waterbody and its complex chemistry and biological community. This initial assessment will serve as a catalyst for future federal funding.

Justification

- Studies by the U.S. Geological Survey and Kennecott Copper show methyl mercury values more than triple the values other states use as warning levels.
  - Great Salt Lake values: 30 to 60 ng/L.
  - Warning values used by other states: 5 to 10 ng/L.

- Tissue analysis of ducks prompted the Utah Division of Wildlife Resources to issue the nation's first consumption advisories for three species of migratory waterfowl:
  - Northern Shoveler (issued 9-29-05)
  - Goldeneye (issued 9-29-05)
  - Cinnamon Teal (issued 9-21-06)
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- To maximize resources and streamline approaches, a coordinated assessment, led by DEQ, is underway. Partners include:
  - USGS
  - USFWS
  - DWR
  - Great Salt Lake Alliance
- Grant proposals have been submitted to supplement funding.

Ongoing Funding Request - Mercury Source Assessment

$26,100 for fish tissue analysis
$3,900 for sample preparation
$78,500 for FTE (Scientist III)
$38,600 for source assessment at hot spots
Total: $147,100 in ongoing funds

Fish are an effective barometer for measuring mercury's impacts to a waterbody. Mercury bio-accumulates, so fish tissue analysis is generally the most economical means to assess information about a particular lake or river.

Eating fish with elevated mercury values poses a significant health risk, especially to infants and children. Given the thousands who fish Utah's waters each year, full characterization of the extent of contamination and the potential risks is needed.

Once waterbodies with elevated mercury are identified, steps should be taken to identify sources and minimize public exposure. One full-time environmental scientist position is requested to perform this essential work.

Justification

- Analysis of fish tissues from over 200 locations reveals as many as 50 sites with elevated mercury levels.

- To date, three consumption advisories have been issued for mercury in fish:
  - Gunlock Reservoir for Largemouth Bass
  - Millcreek near Moab for Brown Trout
  - Desolation Canyon portion of the Green River for Channel Catfish.)

- Data collected in 2006 is currently being assessed by the Department of Health. Preliminary results suggest more advisories will be forthcoming.

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